

Import Price Pressure on Firm Production and Input Choice: The Case of US Textiles

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Abstract

I combine the detailed plant-level information available in the US Census of Manufacturers and the Annual Survey of Manufacturers for the period 1983-2000 with price data on imports to examine the relative contribution of technology and import competition to the decline in output and employment in textiles production in the US in recent years.

The methodology employs a number of important innovations in examining the impact of falling import prices on the domestic production of an import-competing good. First, import competition is modeled directly through its impact on the relative prices of monopolistically competitive goods along the lines suggested by Melitz (2000). Second, the effect of technology is incorporated through structural estimation of plant-level production functions in four factors (capital, labor, energy and materials). Econometric difficulties related to missing capital data and unobserved productivity are incorporated into the estimation technique.

The model is estimated on two 4-digit sectors of textiles production (SIC 2211, broadwoven cotton and SIC 2221, broadwoven man-made fiber). The results validate modeling the production sectors as monopolistically competitive, and the elasticity of substitution between foreign and domestic varieties is found to be quite high. The coefficients on the productive technology are sensible, with a large role found for technological progress.

In the simulations run, the effects of foreign price competition are orders of magnitude higher than those of technological progress for the period 2000-2005. The large-scale reduction in employment and output in the US is shown to be a combination of reduced employment and output at plants in continuous operation and of plant closures that exceed new entries.